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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,027	10/15/2001	Joseph P. Odenwalder	020032	5645
23696 7590 09/18/2007 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER HO, CHUONG T	
			ART UNIT 2616	PAPER NUMBER
			NOTIFICATION DATE 09/18/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/981,027		ODENWALDER ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	CHUONG T. HO		2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-23 and 26 is/are allowed.
- 6) ☒ Claim(s) 1-7, 24-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. The Office Action is in response to the amendment filed 05/25/07. Claims 1-7, 24-25, 8-12, 26, 13-23 are pending.
2. Applicant's arguments with respect to claims 1-7, 24-25, 8-12, 26, 13-23 have been considered but are moot in view of the new ground(s) of rejection.
3. Claims 1-7, 24-25, 8-12, 26, 13-23 are pending

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Das et al. (US 2002/0167992 A1) in view of Hsu et al. (US 6,665,309 B2).

In the claim 1, Das et al. discloses Code Division Multiple Access (CDMA) that comply with the cdma2000 1xEV-DV standard, there are two control channels per data channel...The first control channel, which is called the primary control channel, contains timing information for the user information. The second control channel, which is called the secondary control channel, contains various information that describe the format and the identification of the user information being transmitted over the data channel (see col. 1, lines 55-65); comprising:

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- ◆ generating a first control channel comprising an indicator, the sub-packet comprising at least one slot, the slot comprising at least two sub-slots. ([0007], information in both control and data channels are transmitted in the form of sub-packets "sub-packet comprising at least one slot" during one or more time slots "sub-slots") and parameters of the traffic channel (see page. 1, [0006], lines 58-64, the first control channel, which is called the primary control channel, contains timing information for the user information, see page 1, [0009] lines 25-40, the primary control channel contains information about the particular time slot or slots to which a sub-packet in a particular data channel is assigned, see page 3 [0019] lines 15-25);
- ◆ generating at least one second control channel, each of said at least one second control channel comprising (a) an identity (MAC ID) of at least one subscriber station intended to share the sub-packet (see page 1, [0008] lines 20-25, the second control channel information includes the MAC ID of the sub-packet which identifies a user on shared channel. The secondary channel information further includes: (1) Sub-packet ID which identifies a particular sub-packet being transmitted over a data channel; (2) Automatic Retransmission request (ARQ) channel ID which identifies a logical ARQ channel; (3) New packet indication which identifies the first sub-packet of a group of sub-packets being transmitted or acts to demarcate one group of sub-packets from another group) and (b) information enabling the subscriber station to demodulate (decode) the traffic channel (see page 3, [0019] lines 15-30, the receiving equipment will descramble

the received secondary information accordingly and then decode the information).

However, Das et al. is silent to disclosing generating a first control channel comprising an indicator that a traffic channel is to be shared.

Hsu et al. discloses the present invention relates generally to a manner by which to facilitates efficient radio resource utilization in a radio communication system that utilizes shared channels, such as 1xEV-DV forward shared channels defined in CDMA 2000 cellular communication system that provides 1xEV-DV data services. More particular, the present invention relates to apparatus, and an associated method, by which to allocate, control, manage the shared channel through the generation of CDM (code division multiplexing) assignment information (see col. 1, lines 15-20); comprising:

- ◆ generating a first control channel comprising an indicator (col. 4, lines 66-67, the mobile station monitors a common, shared control channel to which the mobile station is assigned to receive CDM assignment information thereon) that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations, the sub packet comprising at least one slot, the slot comprising at least two sub-slots “User 1 CDM Info, User 2 CDM Info, User 3 CDM Info, User 4 CDM Info”, and (b) parameters “the assignment information sets 54 are allocated to the three users” of the shared sub-packet of the traffic channel (see col. 2, lines 64-67, col. 3, lines 1-7, lines 10-15, lines 39-43, lines 51-60, col. 4, lines 24-28, lines 48-51, lines 66-67, col. 5, lines 66-67, col. 6, lines 45-47, col. 7, lines 5-10, lines 54-58, col. 8, lines 1-3, lines 55-62).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Das with the teaching of Hsu to generating a first control channel comprising an indicator that a traffic channel is to be shared in order to improve the throughput of the system by allowing multiple mobile station to monitor a single shared, control channel, i.e., the shared, control channel that is assigned to the particular mobile station.

6. In the claim 2, Hsu et al. discloses generating a first control channel comprising an indicator that a traffic channel is to be shared and a parameter of a traffic channel comprises: generating a first control channel comprising an indicator that a traffic channel is to be shared and a number of subscriber stations sharing a unit of the traffic channel (see col. 2, lines 64-67, col. 3, lines 1-7, lines 10-15, lines 39-43, lines 51-60, col. 4, lines 24-28, lines 48-51, lines 66-67, col. 5, lines 66-67, col. 6, lines 45-47, col. 7, lines 5-10, lines 54-58, col. 8, lines 1-3, lines 55-62).

7. In the claim 3, Das discloses generating at least one second control channel, each of said at least one second control channel comprising an identity (MAC ID) of at least one subscriber station and information enabling the subscriber station to demodulating the traffic channel comprising: generating at least one second control channel, each of said at least one second control channel comprising an identity of at least one subscriber station and number of code channels encoding the unit of the traffic channel see page 1, [008] lines 20-25, the second control channel information includes the MAC ID of the sub-packet which identifies a user on shared channel. The secondary channel information further includes: (1) Sub-packet ID which identifies a

particular sub-packet being transmitted over a data channel; (2) Automatic Retransmission reQuest (ARQ) channel ID which identifies a logical ARQ channel; (3) New packet indication which identifies the first sub-packet of a group of sub-packets being transmitted or acts to demarcate one group of sub-packets from another group) (see page 3, [0019] lines 15-30, the receiving equipment will descramble the received secondary information accordingly and then decode the information).

8. In the claim 4, Hsu discloses transmitting the first control channel at a power required by subscriber station with the worst forwarding link quality metric for which the first control channel is intended (see col. 5, lines 66-67, col. 6, lines 1-3).

9. In the claim 5, Das discloses transmitting each of the at least one second control channel at a power required by a subscriber station for which the at least one second control channel is intended (see page 1, [008] lines 20-25, the second control channel information includes the MAC ID of the sub-packet which identifies a user on shared channel. The secondary channel information further includes: (1) Sub-packet ID which identifies a particular sub-packet being transmitted over a data channel; (2) Automatic Retransmission reQuest (ARQ) channel ID which identifies a logical ARQ channel; (3) New packet indication which identifies the first sub-packet of a group of sub-packets being transmitted or acts to demarcate one group of sub-packets from another group) (see page 3, [0019] lines 15-30, the receiving equipment will descramble the received secondary information accordingly and then decode the information).

10. In the claim 6, Hsu discloses generating a first control channel comprising an indicator that a traffic channel is to be shared and a parameters of a traffic channels



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comprising: generating a first control channel comprising an indicator that a traffic channel is to be shared, a first number of sub-divisions of a unit of the traffic channel, and a second number of subscriber station sharing the unit (see col. 2, lines 64-67, col. 3, lines 1-7, lines 10-15, lines 39-43, lines 51-60, col. 4, lines 24-28, lines 48-51, lines 66-67, col. 5, lines 66-67, col. 6, lines 45-47, col. 7, lines 5-10, lines 54-58, col. 8, lines 1-3, lines 55-62).

11. In the claim 7, Das et al. discloses generating at least one second control channel, each of said at least one second control channel comprising and identity (MAC ID) of at least one subscriber station and information enabling the subscriber station to demodulate the traffic channel comprises: generating at least one second control channel, each of said at least one second control channel comprising an identity of at least one subscriber station and starting sub-division of the unit of the traffic channel (see page 1, [008] lines 20-25, the second control channel information includes the MAC ID of the sub-packet which identifies a user on shared channel. The secondary channel information further includes: (1) Sub-packet ID which identifies a particular sub-packet being transmitted over a data channel; (2) Automatic Retransmission reQuest (ARQ) channel ID which identifies a logical ARQ channel; (3) New packet indication which identifies the first sub-packet of a group of sub-packets being transmitted or acts to demarcate one group of sub-packets from another group) (see page 3, [0019] lines 15-30, the receiving equipment will descramble the received secondary information accordingly and then decode the information).



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12. As to claim 24, Hsu et al. discloses wherein two sub-slots include data intended for two subscriber stations (figure 4, User 1 CDM Info, User 2 CDM Info, User 3 CDM Info, User 4 CDM Info).

13. As to claim 25, Hsu et al. discloses wherein X "X = User 1 CDM Info" number of sub-slots include data intended for a first subscriber station, Y "Y = User 2 CDM Info" number of sub-slots include data intended for a second subscriber, X is different from Y (col. 8, lines 25-27, 54 indicates the repetition pattern when only a single user, i.e., mobile station is tuned to receive the assignment information).

***Allowable Subject Matter***

14. Claims 8-12, 26, 13-23 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art (20020167992, 6665309, 6091717) of record does not appear to teach or render obvious the claimed limitations in combinations with the specific added limitations, as recited from independent claims 8, 13: "if the subscriber station identify of the second control channel matches an identity of the first subscriber station, demodulating the traffic channel in accordance with said determined multiplexing and the enabling information"

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kenney et al. (U.S. Patent No. 7,020,091 B2).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CHUONG T. HO** whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **ORGAD EDAN** can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

08/30/07

EDAN D. ORGAD  
SUPERVISORY PATENT EXAMINER

Edan Orgad 9/7/07